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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,648	09/21/2006	Yoshihiro Kato	1034232-000051	5633
21839 7590 02/21/2008 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER MI, QIUWEN	
			ART UNIT 1655	PAPER NUMBER
			NOTIFICATION DATE 02/21/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary

Application No.

10/593,648

Applicant(s)

KATO ET AL.

Examiner

QIUWEN MI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/21/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, claims 1-4, 6, and 8-10, in the reply filed on 1/11/2008 is acknowledged.

Claims Pending

Claims 1-4, and 6-10 are pending. Claim 5 is cancelled. Claim 7 is withdrawn as they are directed toward a non-elected invention group. Claims 1-4, 6, and 8-10 are examined on the merits.

Claim Rejections –35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 USC § 102 (b) as being anticipated by Van et al (WO 99/03892).

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Van et al teach a pectin with an average molecular weight of 30-2000 kDa (3×10^4 - 2×10^7), an arabinose content of 2-30 mol%, a galactose content of 5-20 mol%, a rhamnose content of 1-15 mol%, a galacturonic acid content of 30-85% mol%. The novel pectin is excellent emulsifier and can also be used as a binder, as a surfactant, and as dietary fiber (see Abstract). It is inherent that the peak molecular weight is within the claimed range.

Therefore, the reference is deemed to anticipate the instant claim above.

Claim Rejections –35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van et al (WO 99/03892) in view of Mann (US 2002/0168429), as evidenced by Denzinger et al (US 5,227,446)*.

Van et al teach a pectin with an average molecular weight of 30-2000 kDa (3×10^4 - 2×10^7), an arabinose content of 2-30 mol%, a galactose content of 5-20 mol%, a rhamnose content of 1-15 mol%, a galacturonic acid content of 30-85% mol%. The novel pectin is excellent emulsifier and can also be used as a binder, as a surfactant, and as dietary fiber (see Abstract). It is inherent that the peak molecular weight is within the claimed range.

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As evidenced by Denzinger et al, pectin has principal constituents comprise D-glucuronic acid, D-galacturonic acid, L-galactose, L-arabinose, L-rhamnose, D-xylose, D-mannose, D-fructose, and D-glucose (col 4, lines 34-46).

Van et al do not teach pectin separated from *Nigella sativa*.

Mann teaches nutritional supplement (Bio-Shield) being produced with virtually any plant material. The preferred plant materials to be utilized in the invention include *Nigella sativa* (thus by culturing *Nigella sativa* plant that contains cells) etc [0039]. The two principal components of the Bio-Shield system are the natural fruit fibers and pectins combined with the bio-active ingredient [0037]. The natural pectin components of the product slow down the digestive process in the intestines and provide a natural sustained release of the active compounds from the fiber matrix, thereby enhancing the bioavailability of the active components [0032].

It would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to use the pectin from *Nigella sativa* of Mann in the invention of Van et al which uses pectin as a dietary fiber since Mann teaches that the natural pectin components of the product slow down the digestive process in the intestines and provide a natural sustained release of the active compounds from the fiber matrix, thereby enhancing the bioavailability of the active components. Since all the compositions yielded beneficial results in nutritional supplement, one of ordinary skill in the art would have been motivated to make the modifications and combine two pectin products together. Regarding the limitation to the ratio of constituent sugars, the result-effective adjustment in conventional working parameters is deemed merely a

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matter of judicious selection and routine optimization which is well within the purview of the skilled artisan.

From the teachings of the references, it is apparent that one of the ordinary skills in the art would have had a reasonable expectation of success in producing the claimed invention.

Thus, the invention as a whole is *prima facie* obvious over the references, especially in the absence of evidence to the contrary.

*This reference is cited merely to relay an intrinsic property and is not used in the basis for rejection *per se*.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qiuwen Mi whose telephone number is 571-272-5984. The examiner can normally be reached on 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on 571-272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Qiuwen Mi


MICHELE FLOOD
PRIMARY EXAMINER